







ВВГнгд-FR 3x50-1 ТУ У 31.3-00214534-055:2006

Fire-resistant power cables with copper conductors, with low fire-risk PVC-compound insulation, with low fire-risk PVC-compound outer sheath

Cables are used for laying:

- · in bunches
- · in premises, dry ducts and tunnels, in corrosive environment
- · in bunches, in crowded places
- power supply cable lines of NPP safety system equipment, circuits wiring of fire safety systems (fire alarm circuits, power supply of fire-fighting pumps, lightning of emergency exits and evacuation routes, smoke exhaust and blowing ventilation systems, evacuation elevators); for wiring in hospital surgical wings, emergency and equipment (current collectors) power supply circuits, operating in a fire emergency

Manufacturing of cable with multiwire conductors is possible Manufacturing of extruded fire-resistant barrier is possible

Fire safety code in accordance with ДСТУ 4809:2007: ПБ123121080

Products of this mark meet the requirements:

- · single wire cable flame retardance
- bunched cable flame retardance category A
- toxicity class Tk3 of the combustion products of nonmetallic elements (toxicity index over 120 g/m3)
- class $\Delta T \kappa 1$ on smoke-forming ability by smouldering of non-metallic elements (coefficient of smoke formation from 50 to 500 m²/kg)
- class ДΠκ2 on smoke-forming ability by combustion (minimum luminous flux more than 60 %)
- corrosive class $K\kappa 1$ of combustion products of non-metallic elements (the number of halogen hydrides less than 150 mg/g, pH less than 4.3, specific conductivity more than 10 μ S/mm)
- flame-resistant class FE180 under fire conditions with a temperature not less than 750 °C







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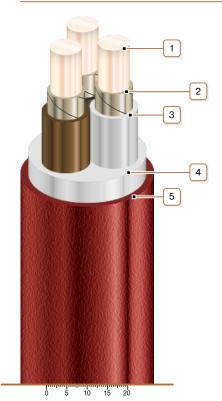
TECHNICAL SPECIFICATIONS

| Rated voltage | kV | 1 |
|--|-------|------------------|
| Number and rated area of conductors | mm² | 3 x 50 |
| Phase insulation thikness | mm | 1.4 |
| Permissible continious current rating (AC of industrial frequency) * | • | |
| • by aerial laying | Α | 167 |
| • by burial | Α | 187 |
| Maximum permissible conductor temperature | | |
| Continious | °C | +70 |
| in emergency operation | °C | +80 |
| • at short circuit | °C | +250 |
| Operating temperature range | °C | -50 +50 |
| Minimum bending radius by laying | mm | 262.5 |
| Rated outer diameter of the cable (for reference) ** | mm | 35 |
| Cable weight (approximate) | kg/km | 2480 |
| Rated factory cable length and gross weight of the delivery | m, t | # 16a: 780 · 2.2 |
| on the drums *** | | # 18: 890 • 2.7 |
| Notes. | | |

Notes:

When ordering it is neccesary to agree the factory length of the product with the manufacturer

^{**} The external diameter may differ from the rated up to \pm 10 %



CONSTRUCTION

- 1. Copper conductor
- 2. Fire-resistant barrier

Note: Manufacturing of extruded fire-resistant barrier is possible

- 3. Low fire-risk PVC compound insulation
- 4. Low fire-risk PVC-compound inner sheath
- 5. Low fire-risk PVC compound outer sheath

Note: Conductor twisting is not illustrated

^{*} Long permissible current loads are calculated for the following conditions: air temperature plus 25 °C, soil temperature plus 15 °C, thermal resistivity of soil 1.2 °K • m/W, laying depth in the soil 0.7 m